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Ah Hwee Tan

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EXAMINER

KENNEDY, ADRIAN L

ART UNIT

PAPER NUMBER

2129

NOTIFICATION DATE

DELIVERY MODE

05/07/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/532,163	Applicant(s) TAN ET AL.	
	Examiner ADRIAN L. KENNEDY	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2129

Examiner's Detailed Office Action

1. This Office Action is responsive to **Application 11/610,201** filed **December 13, 2009**
2. **Claim 1-20** will be examined.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the claimed invention is rejected due to the fact that it is (1) not tied to another statutory class (such as a particular apparatus), nor does it (2) transform underlying subject matter to a different state or thing.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

However, the portions of the opinions in State Street and AT&T relying solely on a “useful, concrete and tangible” result analysis should no longer be relied on. Ex parte Bilski, Appeal No. 2007-1130 (Fed. Cir. October 30, 2008).

The court has said that there's a two-pronged test to determine whether a software method process patent is valid: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. In other words, pure software or business method patents that are neither tied to a specific machine nor change something into a different state are not patentable. Ex parte Bilski, Appeal No. 2007-1130 (Fed. Cir. October 30, 2008).

Art Unit: 2129

The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies §101 either by showing that his claim is tied to a **particular** machine, or by showing that his claim transforms an article. *See Benson*, 409 U.S. at 70. Certain considerations are applicable to analysis under either branch. First, as illustrated by *Benson* and discussed below, the use of a specific machine or transformation of an article must impose **meaningful limits on the claim's scope** to impart patent-eligibility. *See Benson*, 409 U.S. at 71-72. Second, the involvement of the machine or transformation in the claimed process must **not** merely be insignificant extra-solution activity. *See Flook*, 437 U.S. at 590. (See *In re Bilski*, 88 USPQ2d at 1396, emphasis added.)

The body of the claims needs to be tied to a statutory class and produce a concrete, useful and tangible result. For example, how is “presenting” to a buyer a ranked list of goods and services observable and useful in the real world?

[In *Abele*], we held unpatentable a broad independent claim reciting a process of graphically displaying variances of data from average values. *Abele*, 684 F.2d at 909. **That claim did not specify any particular type or nature of data; nor did it specify how or from where the data was obtained or what the data represented.** *Id.*; ... In contrast, we held one of *Abele*'s dependent claims to be drawn to patent-eligible subject matter where it specified that “said data is X-ray attenuation data produced in a two dimensional field by a computed tomography scanner.” *Abele*, 684 F.2d at 908-09. This data clearly represented physical and tangible objects, namely the structure of bones, organs, and other body tissues. Thus, the transformation of that raw data into a particular visual depiction of a physical object on a display was sufficient to render that more narrowly-claimed process patent-eligible.

... So long as the claimed process is limited to a practical application of a fundamental principle to transform **specific** data, and the claim is limited to a **visual depiction that represents specific physical objects or substances**, there is no danger that the scope of the claim would wholly pre-empt all uses of the principle.

This court and our predecessor court have frequently stated that adding a data-gathering step to an algorithm is insufficient to convert that algorithm into a patent-eligible process. *E.g.*, *Grams*, 888 F.2d at 840 (step of “deriv[ing] data for the algorithm will not render the claim statutory”); *Meyer*, 688 F.2d at 794 (“[data-gathering] step[s] cannot make an otherwise nonstatutory claim statutory”). ... **A requirement simply that data inputs be gathered—without specifying how—is a meaningless limit** on a claim to an algorithm because every algorithm inherently requires the gathering of data inputs. *Grams*, 888 F.2d

Art Unit: 2129

at 839-40. Further, the inherent step of gathering data can also fairly be characterized as **insignificant extra-solution activity**. See *Flook*, 437 U.S. at 590. (See *In re Bilski*, 88 USPQ2d 1397-1398, emphasis added)

Based on this guidance, examiner finds that the claimed method does not specify any particular type of machine for implementing the claimed invention. *In re Bilski*, 88 USPQ2d 1397-1398 quoting *Grams* and *Flook*.

As a corollary, the *Diehr* Court also held that **mere field-of-use limitations are generally insufficient** to render an otherwise ineligible process claim patent-eligible. See 450 U.S. at 191-92 (noting that ineligibility under §101 “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment”). ... Pre-emption of all uses of a fundamental principle in all fields and pre-emption of all uses of the principle in **only one field** both indicate that the claim is **not limited to a particular application** of the principle. See *Diehr*, 450 U.S. at 193 n.14 (“A mathematical formula *in the abstract* is nonstatutory subject matter regardless of whether the patent is intended to cover all uses of the formula or only limited uses.”) (emphasis added). ...

The *Diehr* Court also reaffirmed a second corollary to the machine-or-transformation test by stating that “insignificant postsolution activity will **not** transform an unpatentable principle into a patentable process.” *Id.* at 191-92; see also *Flook*, 437 U.S. at 590 (“The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.”). The Court in *Flook* reasoned:

A competent draftsman could attach some form of post-solution activity to almost any mathematical formula; the Pythagorean theorem would **not** have been patentable, or partially patentable, because a patent application contained a final step indicating that the formula, when solved, could be usefully applied to existing surveying techniques.

437 U.S. at 590. Therefore, **even if** a claim recites a specific machine or a particular transformation of a specific article, the recited machine or transformation **must not constitute mere “insignificant postsolution activity.”** (See *In re Bilski*, 88 USPQ2d 1393, emphasis added)

5. Claims 13-38 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the claimed invention does not produce a concrete

Art Unit: 2129

useful and tangible result. Furthermore, how can "interpreting the output of the associative discoverer" be observed in the real world?

The claims fail to provide a tangible result, and there must be a practical application, by either

- 1) transforming (physical thing) or
- 2) by having the FINAL RESULT (not the steps) achieve or produce
a useful (specific, substantial, AND credible),
concrete (substantially repeatable/non-unpredictable), AND
tangible (real world/non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6, 8-10, 13-18, 20-22, 25-32 and 34-36 rejected under 35 U.S.C. 103(a) as being unpatentable over **He et al.** (Machine Learning Methods for Chinese Web Page Categorization, referred to as He) in view of **Kanaegami et al.** (USPN 5,297,039, referred to as Kanaegami).

Regarding claims 1, 13 and 25:

Art Unit: 2129

He teaches,

extracting from text documents semi-structured meta-data (He: Page(P) 94, Left Column (LC), ¶ 5), wherein the semi-structured meta-data includes a plurality of entities and a plurality of relations between the entities (He: P 94, LC, ¶ 3; Examiner's Note (EN): The examiner takes the position that the “words” taught in the invention of He, are equivalent to the key entities in the applicant’s claimed invention. Additionally, the examiner takes the position that in teaching the “words” being in “classes”, He anticipates the “relations” of applicant’s claimed invention.);

identifying (He: P 93, Right Column (RC), ¶ 1) from the semi-structured meta-data a plurality of key entities and a corresponding plurality of key relations (Page 94, Left Column, Paragraph 3; EN: The examiner takes the position that the “words” taught in the invention of He are equivalent to the key entities in the applicant’s claimed invention. Additionally, the examiner takes the position that in teaching the “words” being in “classes”, He anticipates the “relations” of applicant’s claimed invention.);

deriving from a domain knowledge base (He: P 93, RC, ¶ 1) a plurality of attributes relating to each of the plurality of entities relating to one of the plurality of key entities for forming a plurality of pairs of key entity and a plurality of attributes related thereto (He: P 96, LC, ¶ 1);

analyzing the plurality of patterns using an associative discoverer (He: P 93, LC, ¶ 1; EN: The examiner takes the position that the associative map of He anticipates the applicant’s claimed associative discoverer. This position this is supported by the applicant teaching in Paragraph 0045, that the “associative discover may embody a statistical method, a

Art Unit: 2129

symbolical machine-learning algorithm, or a neural network model” and that the “neural network model may comprise, for example, an Adaptive Resonance Theory Map”.); and interpreting the output of the associative discoverer for discovering knowledge (He: P 96, LC, ¶ 2; EN: The examiner takes the position that “interpreting”, as claimed by the applicant, is inherent in the process of learning and knowledge discovery in He.).

Regarding claims 13-24, the examiner takes the position that in teaching the use of his invention for processing input text data, He anticipates the use of program code which facilitates the execution of his method. Additionally, in teaching the downloading of the text data from web pages (He: P 93, RC, P 1), He anticipates the program code being computer readable.

Regarding claims 25-38, the examiner takes the position that in teaching methods which perform the functions of the applicant’s claimed means, He anticipates the applicant’s claimed means.

He does not teach the use of “pairs of key entities” and a “plurality of attributes attributed thereto”.

However, Kanaegami teaches,

The use of pairs of key entities, and a plurality of attributes attributed thereto (Kanaegami: Column(C) 13, Lines(L) 3-6; EN: The examiner takes the position that the elements of the triplet anticipate the applicant’s claimed “pairs of entities”, and that the “attributes”, as claimed by the applicant, are anticipated by the relation in the invention of Kanaegami.).

Art Unit: 2129

It would have been obvious to one skilled in the art at the time of invention to combine the text categorization system of He with the text matching system of Kanaegami for the purpose of text “*information extraction*” (Kanaegami: C 2, L 6-11).

Regarding claims 2, 14 and 28:

He teaches,

(Original) The method wherein the step of extracting from text documents comprises the step of extracting text content from documents containing at least one type of text, image, audio, and video information (He: P 94, LC, ¶ 94).

Regarding claims 3, 15 and 29:

Kanaegami teaches,

(Previously presented) The method wherein the step of identifying the plurality of key entities comprises the step of selecting the plurality of key entities according to frequency of appearance of the plurality of key entities in the semi-structured meta-data (Kanaegami: C 5, L 3-7; C 5, L 23-27; EN: The examiner takes the position that the “identifying”, as claimed by the applicant, is anticipated by the searching in the invention of Kanaegami. Additionally, the examiner takes the position that the “selecting” as claimed by the applicant, is anticipated by the keyword extracting taught in the invention of Kanaegami.).

Regarding claims 4, 16 and 30:

Art Unit: 2129

Kanaegami teaches,

(Previously presented) The method wherein the step of identifying the plurality of key relations comprises the step of selecting the plurality of key relations according to of frequency of appearance of the plurality of key relations in the semi-structured meta-data (Kanaegami: C 5, L 3-7; C 5, L 23-27; EN: The examiner takes the position that the “identifying”, as claimed by the applicant, is anticipated by the searching in the invention of Kanaegami. Additionally, the examiner takes the position that the “selecting” as claimed by the applicant, is anticipated by the keyword extracting taught in the invention of Kanaegami.).

Regarding claims 5, 17 and 31:

He teaches,

(Original) The method wherein the step of deriving from the domain knowledge base comprises the step of deriving from a domain knowledge base relating to at least one of taxonomy (He: P 94, LC, ¶ 2; EN: The examiner takes the position that a lexicon anticipates the applicant’s claimed taxonomy.), a concept hierarchy network, ontology, a thesaurus, a relational database, and an object-oriented database.

Regarding claims 6, 18 and 32:

Kanaegami teaches,

(Original) The method wherein the step of deriving the plurality of attribute comprises the step of deriving a set of attributes or lower level entities characterizing the plurality of

Art Unit: 2129

entities relating to the plurality of key entities (Kanaegami: C 12, L 22-23; C 12, Lines 35-38; EN: The examiner takes the position that the parts of speech identified in said analysis networks during syntactical analysis, are attributes and/or lower level entities that characterize the analysis networks taught in the invention of Kanaegami.).

Regarding claims 8, 20, 34:

He teaches,

(Original) The method wherein the step of analyzing the plurality of patterns using the associative discoverer comprises the step of analyzing the plurality of patterns using at least one of a neural network (He: P 95, RC, ¶ 3), a statistical system, and a symbolic machine learning system.

Regarding claims 9, 21 and 35:

He teaches,

(Original) The method wherein the step of analyzing the plurality of patterns comprises the step of analyzing the plurality of patterns using an Adaptive Resonance Associative Map (He: P 95, RC, ¶ 3).

Regarding claims 10 and 22:

He teaches,

(Currently Amended) The method wherein the step of interpreting the output of the associative discoverer for discovering knowledge comprises the step of discovering the

Art Unit: 2129

relations between the plurality of attributes and the plurality of key entities (He: P 95, RC, ¶ 3; EN: The examiner takes the position that the “discovering [of] the relations” is inherent in the process of category recognition amongst patterns. Additionally, the examiner takes the position that the applicant's specific claiming of discovering semantic relations would have been obvious in light of He teaching the broad learning of relations.).

Regarding claim 26:

He teaches,

(Currently Amended) The system wherein the semi-structured meta-data comprises definition of entities and semantic relations among the entities (He: P 94, LC, ¶ 3; EN: The examiner takes the position that the “words” taught in the invention of He et al., are equivalent to the key entities in the applicant’s claimed invention. Additionally, the examiner takes the position that in teaching the “words” being in “classes”, He et al. anticipates the “relations among the entities” of applicant’s claimed invention. Finally, in not explicitly teaching what type of relation he learns, He anticipates the applicant’s specific claiming of “semantic relations”).

Regarding claim 27:

He teaches,

(Currently Amended) The system wherein the semi-structured meta-data is stored in at least one of a permanent and temporary storage (He: P 94, LC, ¶ 3; EN: The examiner

Art Unit: 2129

takes the position that in teaching that the lexicon “contains” words, it is inherent that the words are stored in the lexicon, and that the lexicon is stored in some form that that can be accessed by segmentation model. Additionally, the examiner asserts that it is incorrect for the applicant to claim “at least one of” two separate storage methods be used, then claim that both be used via an "and" statement. Regardless, the examiner takes the position that storing in permanent and/or temporary storage would have been obvious to one of ordinary skill in the art at the time of invention in light of the common use of volatile and non-volatile memory in the computer arts.).

Regarding claim 36:

He teaches,

(Original) The system according to claim 25 wherein the knowledge comprises implicit hidden key relations between the attributes of the entities and the key entities (He: P 94, LC, ¶ 3; EN: The examiner takes the position that the “words” taught in the invention of He, are equivalent to the key entities in the applicant’s claimed invention. Additionally, the examiner takes the position that in teaching the “words” being in “classes”, He anticipates the “relations among the entities” of applicant’s claimed invention. Finally, in broadly teaching relation between entities, He anticipates the specific claiming of “implicit hidden relations”).

Art Unit: 2129

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7, 19 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **He et al.** (Machine Learning Methods for Chinese Web Page Categorization, referred to as He) in view of **Kanaegami et al.** (USPN 5,297,039, referred to as Kanaegami) and further in view of **Tan et al.** (Predictive Self-Organizing Networks for Text Categorization, referred to as Tan).

Regarding claim 7, 19 and 33:

Neither, He nor Kanaegami teach the use of “concatenated vector representation of the plurality of attributes”.

However, Tan does teach,

The use concatenated vector representations of the plurality of attributes (Tan: P 69, Equation 6; EN: The examiner take the position that equation 6 anticipates that applicant’s claimed “concatenated vector representation”. This position is supported by the equation of Tan being substantially similar to the equation 1 taught in Paragraph 0064 of applicant’s disclosure.) and the plurality of key entities relating to the corresponding plurality of key relations.

Art Unit: 2129

It would have been obvious to one skilled in the art at the time of invention to combine the text categorization system of He with the text knowledge discovery method of Tan for the purpose of the classification of text documents (Tan: P 66, ¶ 1).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 11, 12, 23, 24, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **He et al.** (Machine Learning Methods for Chinese Web Page Categorization, referred to as He) in view of **Kanaegami et al.** (USPN 5,297,039, referred to as Kanaegami) and further in view of **Tan et al.** (Learning User Profiles for Personalized Information Dissemination, referred to as Tan).

Regarding claims 11, 23 and 37:

Neither, He nor Kanaegami teach the use of a “user interface for displaying”.

Tan teaches,

(Original) The method further comprising the step of using a user interface for displaying the semi-structured meta-data, the plurality of key entities, the plurality of key relations, the plurality of attributes, and the knowledge discovered (Tan: P 187 LC, ¶ 5; EN: The

Art Unit: 2129

examiner takes the position that in teaching the displaying of news from categories, Tan et al. anticipates the applicant's claimed "user interface for displaying").

It would have been obvious to one skilled in the art at the time of invention to combine the text categorization system of He with the text knowledge discovery method of Tan for the purpose of text feature extraction (Tan: P 186, RC, ¶ 2).

Regarding claims 12, 24 and 38:

Neither, He nor Kanaegami teach the use of a "user interface for obtaining user instruction".

Tan teaches,

(Original) The method further comprising the step of using a user interface for obtaining user instruction for the plurality of key entities and the plurality of key relations (Tan: P 187, LC, ¶ 5; EN: The examiner takes the position that in teaching the selection of news from categories, Tan anticipates the applicant's claimed "user interface for obtaining user instruction").

It would have been obvious to one skilled in the art at the time of invention to combine the text categorization system of He with the text knowledge discovery method of Tan for the purpose of text feature extraction (Tan: P 186, RC, ¶ 2).

Response to Arguments

Applicant's arguments filed on March 6, 2009 have been fully considered but are moot in light of

Art Unit: 2129

the new grounds of rejection set forth above.

In reference to Applicant's argument:

Instead, He merely discloses a domain knowledge that relates to linking keywords to classes and clearly does not convert the keywords into a plurality of attributes as recited in each of amended claims 1, 13, and 25.

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the fact that none of claims 1, 13, nor 25 have been amended as argued and do not recite “convert[ing] the keywords into a plurality of attributes”.

In reference to Applicant's argument:

Kanaegami does not specifically mention that the disclosed text search system is able to perform Chinese documents processing.

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the fact that no place in the claimed invention does the applicant recite any specific type of text.

In reference to Applicant's argument:

Key entities are entities obtained from extracting semi-structured meta-data from free-text documents that are stored in a meta-data store on a permanent or temporary bases

Examiner's response:

Art Unit: 2129

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the fact that the paragraphs indicated 1) do not recite “key entities” and 2) only provide exemplary embodiments (and not definitions) of what the claim language can be. Furthermore, in not explicitly defining the claim language in the disclosed invention, the examiner has asserted interpretations of the terms recited in the claims and has found that those interpretations are consistent with the term’s meanings as they would have been known by one of ordinary skill in the art at the time of invention. Therefore, if the applicant intends to rely on specific interpretations of claim language for claim scope, those interpretations must be recited in the claims and supported by the specification, due to the examiner's inability to rely on exemplary embodiments mentioned in the disclosure when interpreting claim language.

In reference to Applicant's argument:

Although Applicant agrees that lexicon is similar to the claimed taxonomy, claims 5, 17, 31 relate to derivation from a domain knowledge base of various source types, of which only one of the various source types is related to a taxonomy.

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the fact that the applicant has presented an argument which the claim language does not support. Specifically the applicant argues that the derivation is relating to various sources where **only one** of the sources is related to the taxonomy, however the claim language explicitly recites deriving from sources relating to “**at least one of**” and not “**only one of**” the sources related to the taxonomy, et cetera.

Art Unit: 2129

In reference to Applicant's argument:

Kanaegami makes no particular mention that the selection of verbs positioned after respective nouns is specifically for characterizing the plurality of entities relating to the plurality of key entities as described in each of claims 6 and 18 and claim 32 of the present application.

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the fact that no place in the indicated claims does the applicant recited verbs being positioned after nouns.

In reference to Applicant's argument:

Applicant agrees that He teaches learning categories consisting of “learning relations” between input and output patterns but is silent on discovering the semantic relations between the plurality of attributes and the plurality of key entities.

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the examiner's position that the applicant's learned "semantic relations" are a subset of “relations” and therefore obvious in light of He teaching the broad learning of "relations". Furthermore, in teaching the broad learning of relations, the examiner takes the position that the specific recitation of learning “semantic relations” would have been obvious to one of ordinary skill in the art.

In reference to Applicant's argument:

However, Applicant respectfully submits that the He disclosure of “words” being in “classes” is

Art Unit: 2129

not equivalent to the "relations among the entities" of Applicant claimed invention. Specifically, the relations as recited in amended claim 26 refer to semantic relations relating to "words" that can be extracted from text documents without the use of "classes".

Examiner's response:

The examiner has considered the applicant's argument and has found them to be non-persuasive. This position is based on the examiner's position that due to the lack of explicit definitions in the applicant's disclosure and the lack of defining language in the claims, that the examiner's interpretation was reasonable. Additionally, the examiner takes the position that while the extraction of text doesn't require the use of classes, the applicant's claim language does not exclude the use of classes. Furthermore, based on the teaching of the use of clustering in paragraphs 0065 where the applicant explicitly recites the "learning of clusters (pattern classes)" (Emphasis added), the examiner has found his interpretation to not be inconsistent with the applicant's disclosure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Examiner's Opinion:

The examiner has considered the applicant's arguments in light of the claimed invention. Furthermore, the examiner respectfully reminds the applicant that **“during examination, the claims must be interpreted as broadly as their terms reasonably allow”**. (MPEP 2111.01 [R-5] I)

It is the goal of the Examiner to move the applicant's claimed invention towards allowability. However, as presently claimed, the applicant's claimed invention is substantially broad and is broad enough to read on the prior art of record. The examiner respectfully request that the applicant consider what the invention is, and where the line between the prior art (cited by the examiner and/or known by the applicant) and the applicant's intended invention lay. This request is made so the examiner can help the applicant arrive at claim language that not only traverses the language taught in the presently pending and/or previously disclosed prior art, but also traverses concepts taught (or suggested) in prior art known by the examiner and/or applicant which has not been cited. Also, the examiner is more than willing to have an interview with applicant, but requests that the applicant disclose what he or she considers to be the most inventive portion of the claimed and/or disclosed invention.

- Regarding 101, the examiner takes the position that the applicant's claimed invention consists of only manipulations of data. Furthermore, independent claim 1 is nether tied to another statutory class nor 2) produces a transform. Regarding independent claims 13 and 25 the claimed invention does not produce a useful, concrete and tangible result.
- Regarding the claimed invention in general, the examiner takes the position that the claimed invention is substantially broad and that several limitations argue were not supported by the claim language and/or definitions in the disclosure.

Art Unit: 2129

Furthermore, it would be beneficial to future prosecution if the applicant would indicate what claim language (not claim interpretation or disclosure recitation) the prior art does not teach or suggest and what definition(s) in the disclosure contradict the asserted interpretations of the claim language.

- The examiner respectfully requests that should the applicant submit further correspondence, that the applicant contact the examiner prior to said submittal.

This contact should be made to schedule a telephonic or in person interview with the examiner, applicant's representative and if necessary the applicant.

Should the applicant choose to amend, the Examiner respectfully suggests that the applicant more explicitly recite what the applicant considers to be the most novel portion of the disclosed invention in the claimed invention. (The previously cited suggestions are not a recitation of allowable subject matter, but are rather subject matter disclosed/claimed by the applicant which will help further distinguish the claimed invention from the prior art. Furthermore, any amendment will require further searching of the prior art.).

Claim 1-38 is rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrian L. Kennedy whose telephone number is (571) 270-1505. The examiner can normally be reached on Mon -Fri 8:30am-5pm.

Art Unit: 2129

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ALK/

/David R Vincent/

Supervisory Patent Examiner,

Art Unit 2129